10248. Lachnosterna infidelis, Horn. Not common. Wilson county and McPherson. May.
10252. Lachnosterna hornii, Smith. Rare. Wilson county. May.
10253. Lachnosterna biimpressa, Smith. Rare. Specimen in National Museum. Locality Manhattan.
5776. Lachnosterna Knochii, Gyll. Common. Salina and McPherson. May. This species is usually mistaken for the more common rugosa.
10228. Lachnosterna diffinis, Blanch. = rufiola Lec. University collection.
10255. Lachnosterna implicita, Horn. Rare. Wilson county and Agricultural College collection. May.
5782. Lachnosterna balia, Horn. Rare. Agricultural College collection.
—— Lachnosterna minor, Linell. New species, described from a single male specimen in pamphlet No. 1096, Proc. U. S. Nat'l Museum, Vol. XVIII. Collected by F. F. Crevecoeur, Onaga, Kan.
5790. Lachnosterna albina, Burm. Rare. Agricultural College collection.
5791. Lachnosterna parvidens, Lec. Rare. Agricultural College collection.
10266. Lachnosterna affabilis, Horn. Rare. Two males in collection of Dr. Horn; also in Agricultural College collection.
10277. Stephanucha pilipennis, Kraatz. Medora, Reno county, Kansas. May. Taken on sand-dunes.
6209. Microclytus gazellula, Hald. Wilson county. June.
10428. Crepidodera longula, Horn. Taken on willow, in June and July, in Osage and Wilson counties.
6871. Luperus brunneus, Cr. Wilson county. June.
—— Blapstinus sp. Medora. May.
7433. Blapstinus dilatatus, Lec. Taken in sand blow-outs near Medora. May.
7442. Blapstinus moestus, Melsh. Same as 7433.
7460. Ammodonus fossor, Lec. Taken at Medora, Kan., in sand. May.
7531. Hypophloeus cavus, Lec. Taken under hickory bark. Verdigris valley, north of Benedict.
8365. Apion robustum, Smith. Salina, Kan., on sunflower.
8373. Apion sordidum, Smith. Salina, Kan., on sunflower.
8412. Apion griseum, Smith. Salina, Kan., on sunflower.
8420. Apion attenuatum, Smith. Salina, Kan., on sunflower.
—— Apion occidentale, Fall, Mss. Salina, Kan., on sunflower.
—— Apion spinipes, Fall, Mss. Kansas, near Superior, Neb. May. Rare.
—— Nebraskense, Fall, Mss. Kansas, near Superior, Neb. May. Rare.
11115. Baris exigua, Casey. Kansas, near Superior, Neb. May.
—— Rhyncholus sp. Larva burrows in decaying cottonwood; beetles emerge in May and June. Can be taken in winter in larval burrows. Two other species occur with this, but none are described.

THE DRILL HOLE AT WICHITA.

By J. R. MEAD, Wichita, Kan. Read before the Academy January 3, 1896.

In the year 1895, the city of Wichita voted $10,000 in bonds to drill one or more holes to ascertain what of value might be found beneath the city. Coal, salt, oil and gas were among the possibilities.

A sample of each five feet in depth has been preserved in glass jars properly numbered. The hole is within the city limits, in the valley of the Arkansas, one-

fourth of a mile from the river and within 50 feet of the track of the Missouri Pacific railroad. Work commenced October 20, 1895.

The first 12 feet was through surface soil and clay. Strata of quicksand and gravel filled with water were then reached. This constituted the underflow or "subterranean river," as it was called in the newspapers. Great difficulty was experienced in securing a curbing through this sand and water, which caused a delay of several weeks. First, a round wooden pipe, 16 inches in diameter, strongly made of two-inch pine and wrapped with sheet iron, was placed in the hole and gradually sunk by pumping the sand from the inside. As depth was gained the pipe constantly bent to the southeast, indicating a pressure in that direction. Trains passing imparted a quivering motion to the sand and water. The wooden pipe was abandoned, as it could not be kept vertical. A heavy wrought-iron tube 14 inches in diameter was substituted, which proved a success.

Following is a log of the well, which at this writing has reached the first hard rock, black flint or chert, at a depth of 642 feet:

LOG OF THE WELL.

Depth, feet.	*Thickness, feet.*	
12	12	Surface soil and clay.
27	15	Quicksand and water.
42	15	Coarse sand and gravel, full of water.
80	38	Tenacious blue clay.
90	10	Gypsum crystals (selenite). Between 80 and 90 feet a pocket of smooth water-worn pebbles, consisting of white quartz, quartzite, granite, jasper, etc., broke into the well from the side.
165	75	Alternating layers of clay, gypsum, and clay shales.
250	85	Massive gypsum, gray and black.
265	15	Blue shale.
270	5	Gypsum.
275	5	Light and dark shale.
285	10	Soft clay shale.
295	10	Clay and gypsum.
300	5	Gypsum.
325	25	Blue shale.
350	25	Black shale.
375	25	Blue shale.
385	10	Dark shale.
390	5	Blue shale.
400	10	Black shale.
440	40	Blue shale.
455	15	White and gray gypsum.
480	25	Shale, strongly charged with petroleum.
490	10	Dark shale.
550	60	Light gray shale.
560	10	Gray limestone.
563	3	Fine sand full of very strong brine which rose 300 feet in the drill hole, and would perhaps have risen to the surface had it not been stopped by the insertion of tubing.
572	9	Gray limestone and clay.
575	3	Clay shale.
585	10	Black shale.
590	5	Blue clay.
600	10	Soapstone and clay or shale.

Depth, feet.	*Thickness, feet.*	
610	10	Light gray limestone.
615	5	Dark soapstone.
630	15	Dark shale.
637	7	Gray limestone.
642	5	Black flint (chert).

"CONE-IN-CONE" (AN IMPURE CALCITE).

By H. J. HARNLY, McPherson, Kan. Read before the Academy January 3, 1896.

I have been unable to determine who first named this peculiar variety of impure calcite "cone-in-cone." The name has apparently grown out of its peculiar structure, for "cone-in-cone" in fact it seems to be.

My attention was first called to the mineral about three years ago. Some took it to be fossil wood, which in some respects it resembles; others boring through it in well-making took it for a bed of bones, while still others supposed it to be a distinctive mineral, possibly new. During the summer of 1893 I found it in place in various localities in the northwestern part of McPherson county and the southeastern part of Ellsworth county. It is reported to be found in Lincoln and Russell counties. During the past summer I found it in two localities in Washington county.

In McPherson and Ellsworth counties, where I have seen it in place in many localities, it is found always to occupy the same relative position, underlying the Dakota sandstone and clay, and overlying a bed of shells which varies from a fraction of an inch to two or three inches in thickness. Underlying the bed of shells there is a stratum of clay of considerable thickness, and rich in gypsum crystals. I have found in it almost perfect individual crystals seven inches long. Beneath the clay there is red shale.

The cone-in-cone varies from less than an inch to six or seven inches in thickness. In Washington county it immediately underlies the Fort Benton limestone.

Being desirous to know more definitely what the substance is, I had several analyses made of it. They all agree in making it a calcite with some SiO_2, Fe_2O_3, Al_2O_3, as impurities; the purer specimens giving the regular calcite analysis with but slight impurities. The following are the results of the analyses:

SiO_2 from 1.4 to 5.84 per cent.
Fe_2O_3 and Al_2O_3 from 1.2 to 2.62 per cent.
CaO from 54.13 to 54.64 per cent.
CO_2 from 33.07 to 42.06 per cent.
MgO from .0 to 2.76 per cent.
and traces of several other compounds.

No fossils were found in the cone-in-cone itself. It seems evident that it was deposited from a water solution, probably at the time when the seas were drying up, so that the water became saturated and the animal life destroyed. The peculiar almost constant cone structure is harder to explain, but most probably is due to the impurities.